

BEFORE THE
Federal Communications Commission
WASHINGTON, D.C. 20554

In the Matter of)	
)	
Advanced Television Systems	)	MB Docket No. 87-268
and Their Impact upon the)	
Existing Television Broadcast Service)	

To: The Commission

COMMENTS

Mountain Licenses, LP ("MLLP"), the licensee of KAYU-TV and KAYU-DT, Spokane, Washington (Facility ID No. 58684), by its attorneys, hereby submits its comments in response to the Seventh Further Notice of Proposed Rule Making ("FNPRM") issued by the Commission on October 20, 2006 in the above-captioned proceeding (FCC 06-150).

The FNPRM proposes a new DTV Table of Allotments that provides all eligible stations with channels for DTV operation following the DTV transition. In the first round of the digital channel election process, MLLP elected to operate KAYU-DT on its analog Channel 28 post transition (*see* FCC File No. BFRECT-20050210AKQ), and the FCC subsequently issued the station a tentative channel designation ("TCD") on that channel. *See* Public Notice, DA 05-1743 (released June 23, 2005). However, the FNPRM notes that Industry Canada has objected to KAYU-DT's TCD on Channel 28. FNPRM at 20. When this matter was brought to MLLP's attention in late June 2006, one year after KAYU-DT had been issued its TCD on Channel 28 and after the last round of DTV channel elections had been completed, FCC staff advised MLLP that Industry Canada's objection was based on potential interference to a co-channel digital allotment at Oliver, British Columbia, which is associated with Class VL station CKKM-TV, analog Channel 3. In light of Industry Canada's

objection, the FCC has requested in the FNPRM that MLLP indicate its willingness to either reduce KAYU-DT's coverage on its TCD channel in order to address Industry Canada's concerns or elect an alternate channel from which to operate KAYU-DT post transition. *Id.*

The September 2000 *Letter of Understanding Between the Federal Communications Commission of the United States of America and Industry Canada Related to the Use of the 54-72 MHz, 76-88 MHz, 174-216 MHz, and 470-806 MHz Bands for the Digital Television Broadcast Service Along the Common Border* (the "LOU") sets forth three analytical steps to evaluate proposals for DTV stations along the U.S.-Canada border: Step 1 is based on minimum distance spacing. Step 2 is based on contour overlap. Step 3 is a Longley-Rice analysis. Under the LOU, a proposal is deemed satisfactory if any of the three steps are satisfied. MLLP retained Joseph M. Davis, P.E., of Cavell Mertz & Davis, Inc., to evaluate MLLP's proposal to operate KAYU-DT on digital Channel 28 post transition under the LOU.

Although MLLP's proposal does not satisfy either Step 1 (minimum distance spacing) or Step 2 (contour overlap), as indicated in the attached Engineering Statement prepared by Mr. Davis, which is incorporated herein by this reference, the proposal does satisfy the Step 3 Longley-Rice analysis due to considerable intervening terrain between the services areas of the stations. Engineering Statement at 2. Indeed, Mr. Davis concluded that "the resulting predicted interference area attributable to digital Channel 28 operation of KAYU-TV is minimal and does not affect any populated area in Canada." *Id.*

Because MLLP's proposal satisfies the Step 3 Longley-Rice analysis under the LOU, Industry Canada should approve KAYU-DT's post-transition operation on digital Channel 28. In reliance on its engineering showing, MLLP hereby affirms its existing election of digital Channel 28 for KAYU-DT. However, MLLP understands that FCC cannot approve this

election without the consent of Industry Canada, and therefore respectfully requests that the FCC's International Bureau forward the attached Engineering Statement to Industry Canada for its review and approval pursuant to the terms of the LOU. MLLP previously provided a copy of this Engineering Statement to the International Bureau on an informal basis.

MLLP has concluded in good faith that its proposal to operate KAYU-DT on Channel 28 will not cause impermissible interference to digital CKKM-TV, complies with the terms of the LOU and warrants approval by Industry Canada under the terms of the LOU. Nevertheless, MLLP is justifiably concerned that KAYU-DT will not have an assigned digital channel from which to operate post transition if Industry Canada nevertheless continues to object to that election. Under the circumstances presented, which are beyond MLLP's control, MLLP respectfully submits that the FCC should permit MLLP to make a contingent election to operate KAYU-DT post transition on digital Channel 30, the station's current digital channel, in the event that Industry Canada does not approve MLLP's election of digital Channel 28, and that the FCC should continue to protect digital Channel 30 at Spokane, Washington until this issue has been resolved.

Allowing MLLP to elect to operate KAYU-DT on digital Channel 30 under these circumstances will advance the public interest by ensuring that KAYU-DT will have a protected channel from which to provide digital television service to the residents of the Spokane, Washington area post transition if the station is unable to operate from its preferred Channel 28. Moreover, Channel 30 would be released for use upon Industry Canada's approval of KAYU-DT's operation on Channel 28. In the unlikely event that Industry Canada continues to object to MLLP's election, MLLP will invoke its contingent election and operate KAYU-DT on digital Channel 30 post transition.

Conclusion

The Longley-Rice analysis attached hereto demonstrates, in accordance with the terms of the LOU, that the operation of KAYU-DT on digital Channel 28 will not cause impermissible interference to co-channel digital CKKM-TV. MLLP therefore affirms its election of digital Channel 28 for KAYU-DT, and respectfully requests that the FCC's International Bureau forward a copy of that analysis to Industry Canada for its review and approval. In addition, and for the reasons set forth herein, MLLP also requests that it be permitted to make a contingent election to operate KAYU-DT on digital Channel 30 in the event that Industry Canada continues to object to MLLP's election of digital Channel 28 in order to preserve MLLP's ability to operate KAYU-DT on a protected channel post transition. If, as expected, Industry Canada approves MLLP's proposal to operate KAYU-DT on digital Channel 28, MLLP will relinquish its contingent election of digital Channel 30. If Industry Canada continues to object to that election, MLLP will invoke its contingent election, relinquish its election of digital Channel 28 and operate KAYU-DT on digital Channel 30 post transition.

Respectfully submitted,

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January 25, 2007

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ENGINEERING STATEMENT
prepared for
Mountain Licenses, L.P.
KAYU-TV Facility ID 58684 Spokane, WA

This statement has been prepared on behalf of *Mountain Licenses, L.P.* (“*MLLP*”), licensee of KAYU-TV, Spokane, WA, to provide support regarding the KAYU-TV Tentative Channel Designation. KAYU-TV operates on analog (NTSC) Channel 28 and digital (DTV) Channel 30. In the first round of digital channel elections, *MLLP* elected its analog Channel 28 for KAYU-TV’s final DTV operation (BFRECT-20050210AKQ). Subsequently, the Commission released a Public Notice¹ on June 23, 2005 listing KAYU-TV’s Tentative Channel Designation as Channel 28.

The Public Notice indicates that tentative designations in border zones are subject to international coordination. The KAYU-TV transmitter site is located 158 km from the U.S. - Canadian border and is thus within the 400 km coordination zone. FCC Staff has recently informally contacted *MLLP* to advise that Canada has objected to the KAYU-TV Tentative Channel Designation over concern to a Canadian co-channel digital allotment at Oliver, BC.

This statement provides engineering analysis of the KAYU-TV election of Channel 28, based on the Canadian allotments and procedures stated in the *Letter of Understanding*² (“*LOU*”) regarding digital television along the U.S. - Canadian Border. As described in the following, a detailed Longley-Rice evaluation shows that KAYU-TV on digital Channel 28 would comply with the *LOU*.

The KAYU-TV analog Channel 28 operation is licensed to operate at 2400 kW effective radiated power (“ERP”) and an antenna height above average terrain (“HAAT”) of 601 meters. In its pre-election filing (BCERCT-20041105ARZ) *MLLP* certified that KAYU-TV would operate with a replication facility on its post-transition channel. The parameters for KAYU-TV as a digital facility

¹ DA 05-1743, “*DTV Tentative Channel Designations for 1,554, Stations Participating in the First Round of DTV Channel Elections.*”

² *Letter of Understanding Between the Federal Communications Commission of the United States of America and Industry Canada Related to the Use of the 54-72 MHz, 76-88 MHz, 174-216 MHz, and 470-806 MHz Bands for the Digital Television Broadcasting Service Along the Common Border*, September 2000.

ENGINEERING STATEMENT

(page 2 of 4)

to provide replication consist of 91.419 kW ERP at 601 meters antenna HAAT (at the licensed KAYU-TV site).

According to Appendix 1B of the *LOU*, the Channel 28 digital allotment at Oliver, BC is Class VL and is associated with analog station CKKM-TV, Channel 3. The Canadian UHF Class VL allotment has a maximum permissible post-transition ERP and HAAT of 1000 kW and 325 meters, respectively, according to Table 4.3.2 of the *LOU*. The proposed KAYU-TV digital facility (91.419 kW / 601 m) conforms to that of a Canadian Class VU, based on equivalent distance to service contour.

The *LOU* specifies three analysis steps, in order of increasing complexity, which are employed to evaluate a proposal. The proposal is said to be satisfactory when the criteria of any of the three steps are met. The steps specify analysis based on (1) minimum distance spacing, (2) contour overlap, and (3) Longley-Rice.

KAYU-TV is located 246.9 km from the CKKM-TV digital allotment point, which is short of the 371 km specified in the *LOU* (Table 4.2.1) for co-channel digital Class VU and Class VL stations. Thus, the proposal does not satisfy the *LOU* "Step One" rudimentary analysis based on minimum separation distance.

Similarly, a study using pertinent TV propagation curves concludes that there is overlap of the CKKM-TV 89 km protected radius by the proposed KAYU-TV digital facility's interfering contour. Therefore, the proposal also fails the "Step Two" *LOU* analysis.

A Longley-Rice analysis conducted by the undersigned shows that the proposal does satisfy the *LOU* "Step Three" analysis.³ Due to the effect of considerable intervening terrain between KAYU-TV and the CKKM-TV service area, the resulting predicted interference area attributable to digital Channel 28 operation of KAYU-TV is minimal and does not affect any populated area in Canada.

³ A special implementation of the FCC's OET Bulletin 69 was utilized which was adapted to provide Canadian population analysis with parameters adjusted to correct for the *LOU*'s technical criteria where different from OET Bulletin 69. A cell size of 1 km was employed.

ENGINEERING STATEMENT

(page 3 of 4)

The attached **Table 1** provides a summary of the facility data employed in the Longley-Rice study and the corresponding results. A depiction of the CKKM-TV digital Channel 28 Longley-Rice analysis is provided in **Figure 1**.

As shown therein, the CKKM-TV digital Channel 28 service area contains 15,290 square kilometers of Canadian area and a Canadian population (1996 data) of 144,749 persons. Terrain blockage within the CKKM-TV service area is significant, as the Longley-Rice study shows that Canadian area of 2,762 sq. km and Canadian population of 52,818 persons would not be terrain-blocked from CKKM-TV and would receive digital service. Interference to CKKM-TV's digital Channel 28 facility from KAYU-TV on digital Channel 28 would affect Canadian area of 12 sq. km and zero Canadian population.

An overview of the relative locations of KAYU-TV and CKKM-TV is supplied on a topographic map in **Figure 2**, with a corresponding set of terrain profile plots attached as **Figures 3, 4 and 5**. These exhibits demonstrate the rugged nature of the terrain between KAYU-TV and CKKM-TV as well as within the CKKM-TV service area, which serves to significantly decrease the likelihood of interference.

The "Step Three" analysis concludes that the Canadian area subject to interference from the KAYU-TV proposal (12 sq. km) is 0.08 percent of the Canadian contour area (0.4 percent of the non-terrain blocked area). The Canadian population predicted to receive interference from the KAYU-TV proposal is zero. Thus, the proposal is believed to comply with the *LOU's* published 2 percent criteria for acceptance, which states as follows (at para. 5c):

"While all requests will be judged for acceptability on a case-by-case basis and every attempt will be made to reasonably accommodate requests, the Administrations agree that changes that result in new interference to any station or allotment which affects the population or area coverage by 2% or less, provided that the cumulative interference into the affected station or allotment is not excessive, will generally be deemed acceptable."

ENGINEERING STATEMENT

(page 4 of 4)

Based on the analysis presented herein, KAYU-TV's post-transition use of digital Channel 28 complies with the protection criteria specified in the U.S. - Canadian *LOU*.

Certification

The undersigned hereby certifies that the foregoing statement was prepared by him or under his direction, and that it is true and correct to the best of his knowledge and belief.



Joseph M. Davis, P.E.

August 10, 2006

List of Attachments

Table 1	Longley-Rice Analysis Facility Data and Results
Figure 1	Longley-Rice Interference Study
Figure 2	CKKM-TV Service Area - Topographic Map
Figure 3	Terrain Profile to CKKM-TV (305 degrees T)
Figure 4	Terrain Profile to CKKM-TV (315.5 degrees T)
Figure 5	Terrain Profile to CKKM-TV (327 degrees T)

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Table 1
LONGLEY-RICE ANALYSIS FACILITY DATA AND RESULTS

prepared for
Mountain Licenses, L.P.
KAYU-TV Facility ID 58684 Spokane, WA

TV Incoming Interference Study
CKKM-D.28 (28Z) Oliver, BC
Broadcast Type: Digital Service: T
Lat: 49-08-15 N Lng: 119-40-10 W ERP: 27.0 kW AMSL: 1895.0 m
Interference Considered Within: FCC Contour: 46.1 dBu
Signal Resolution: 1.0 km
LR Profile Spacing Increment: 0.1 km
of radials computed for contours: 72
Contours calculated using 8 radial HAAT.
Threshold for reception: 46.1

Transmitters:

Transmitter Information:

Call Letters: CKKM-D.28
Latitude: 49-08-15 N
Longitude: 119-40-10 W
ERP: 27.00 kW
Channel: 28
Frequency: 557.0 MHz
AMSL Height: 1895.0 m
HAAT: 963.9 m
Horiz. Antenna Pattern: Omni
Vert. Elevation Pattern: Yes
Propagation Model: Longley/Rice
Climate: Continental temperate
Conductivity: 0.0050
Dielectric Constant: 15.0
Refractivity: 301.0
Receiver Height AG: 10.0 m
Time Variability: 90.0%
Situation Variability: 50.0%
ITM Mode: Broadcast

Note: CKKM-DT parameters set to 27 kW at 964 meters HAAT based on equivalent ERP needed to achieve 89 km reference radius at paired analog Ch-3 antenna height (equivalent to post-transition Class VL 1000 kW / 325 m).

Transmitter Information:

Call Letters: KAYU-D28_1321kW
Latitude: 47-34-44 N
Longitude: 117-17-46 W
ERP: 1321.00 kW
Channel: 28
Frequency: 557.0 MHz
AMSL Height: 1332.0 m
HAAT: 601.0 m
Horiz. Antenna Pattern: Directional - Rep
Vert. Elevation Pattern: Yes
Propagation Model: Longley/Rice
Climate: Continental temperate
Conductivity: 0.0050
Dielectric Constant: 15.0
Refractivity: 301.0
Receiver Height AG: 10.0 m
Time Variability: 10.0%
Situation Variability: 50.0%
ITM Mode: Broadcast

Note: KAYU-DT ERP increased from 91.4 kW to 1321 kW (11.6 dB) to correct OET-69 for Canadian criteria.

7.1 dB: factor for F(10,10) from F(50,10)

4.5 dB: Difference of Canadian D/U (19.5 dB) and OET-69 D/U (15.0 dB)

7.1 + 4.5 = 11.6 dB correction

Table 1
LONGLEY-RICE ANALYSIS FACILITY DATA AND RESULTS
 (page 2 of 2)

Stations which cause interference:

Call Letters	Canadian Population	Canadian Area (sq. km)
KAYU-D28_1321kW (28)	0	12

Totals for CKKM-D.28 (28Z) (Canadian Area and Population)

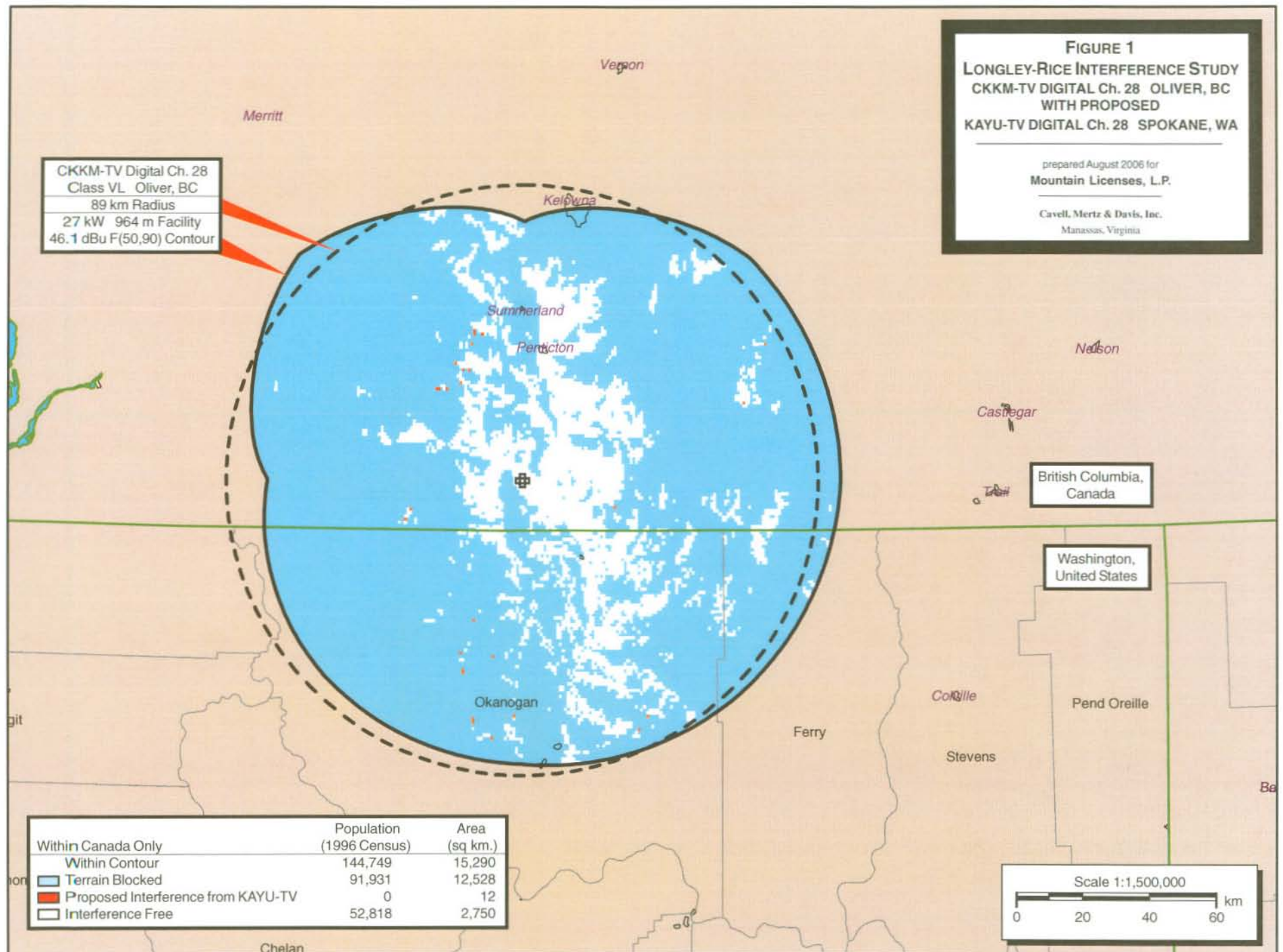
Calculation Area Population:	144,749	(	15290	sq. km)
Not Affected by Terrain Loss:	52,818	(	2762	sq. km)
Total NTSC Interference:	0	(	0	sq. km)
DTV Only Interference:	0	(	12	sq. km)
Total DTV Interference:	0	(	12	sq. km)
Interfered Population:	0	(	12	sq. km)
Interference Free:	52,818	(	2750	sq. km)

FIGURE 1
LONGLEY-RICE INTERFERENCE STUDY
CKKM-TV DIGITAL Ch. 28 OLIVER, BC
WITH PROPOSED
KAYU-TV DIGITAL Ch. 28 SPOKANE, WA

prepared August 2006 for
Mountain Licenses, L.P.

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CKKM-TV Digital Ch. 28
 Class VL Oliver, BC
 89 km Radius
 27 kW 964 m Facility
 46.1 dBu F(50,90) Contour



Within Canada Only	Population (1996 Census)	Area (sq km.)
Within Contour	144,749	15,290
Terrain Blocked	91,931	12,528
Proposed Interference from KAYU-TV	0	12
Interference Free	52,818	2,750



